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ONTARIO
DEPARTMENT OF EDUCATION

Announcement
OF THE
Ontario Training College
FOR
Technical Teachers



HAMILTON, ONT.
1932 - 1935

General

The Ontario Training College for Technical Teachers provides courses of study in methods of teaching and class management for preparation of teachers of practical or shop subjects in vocational schools. These courses are professional or academic in nature and do not include instruction in the practical or trade side of the subject which the student is preparing to teach.

The Training College also provides courses of studies for prospective teachers of manual training. These courses are mainly practical in nature and cover the manipulative experiences found in a manual training class.

Courses of Study

- I. Course for Interim Ordinary Certificate in a Vocational Subject.
- II. Course for Interim Ordinary Certificate in Sewing and Dressmaking.
- III. Course for Permanent Ordinary Certificate in a Vocational Subject.
- IV. Course for Interim Specialist Certificate in a Vocational Subject.
- V. Course for Vocational School Principal's Certificate.
- VI. Special Summer Courses.
- VII. Course for Interim Ordinary Manual Training Certificate.

I.—COURSE FOR INTERIM ORDINARY VOCATIONAL CERTIFICATE

Length of Course

The course will take twenty-five weeks divided into an autumn term and a winter term. The opening and closing dates are as follows:

1932-1933—September 26 to December 16.
January 9 to April 7.

1933-1934—September 25 to December 21.
January 8 to March 29.

1934-1935—October 1 to December 21.
January 7 to April 5.

Requirements for Certificates

Certificates are granted to candidates who,

- (a) have a fair general education, approved by the Minister,
- (b) have had training and experience, approved by the Minister, in the subject for which the certificate is to be issued, and
- (c) have taken a course of training in teaching and school management, approved by the Minister.

Candidates who meet these requirements will be granted Interim Certificates, good for two years.

Permanent Certificates are granted to candidates who hold Interim Certificates and who have had two years' successful experience as teachers in a day vocational school in Ontario, approved by an inspector, and who have completed satisfactorily the special summer course in English, mathematics and science, required by the Regulations for Vocational Schools. Middle School standing in these subjects will be accepted in lieu of this course.

Requirements for Admission

1. General Education:

(a) An applicant for admission shall be required to pass an examination in general education. In case of candidates for shop or practical subjects, the examination will consist of a paper in mathematics and a paper in composition, spelling and penmanship. The work in mathematics will include the four fundamental operations in arithmetic, simple, vulgar and decimal fractions and percentage. In the case of candidates for draughting certificates the paper in mathematics will include arithmetic, algebra, geometry and elementary trigonometry. The examination will be given at the Training College on the first day of the term.

(b) If the applicant submits satisfactory evidence of having taken at least two years' secondary school work or its equivalent, he may be exempted from the examination in general education. In the case of candidates for draughting certificates Middle School standing in mathematics is required.

2. Trade training and experience:

(a) The training or apprenticeship required shall be that usually demanded for journeyman's qualifications in the trade concerned. Special training obtained in an approved day vocational school will be taken into account in considering the period of training. Applicants should submit statements from the persons or firms under whom they were trained, showing the length of the training period and the nature of the work.

(b) The experience required shall be some years' wage-earning journeyman experience with high-grade approved firms, and shall be such as to show that the applicant is a skilled craftsman, competent in all the main branches of the trade, and familiar with its recent developments. The length of the journeyman experience depends upon the nature of the trade. Documentary evidence of experience in the trade in approved shops shall be furnished by the applicant.

(c) In cases where the evidence required in (b) is not conclusive the applicant shall be required to pass an examination designed to test his attainments as a skilled worker in the trade concerned. The examination shall be on the fundamental principles, operations, processes and skills of the trade, and shall be in three parts: (a) oral, (b) written, (c) practical. In the practical examination he shall be required to show his skill in a performance test.

This examination will be given at the Training College in Hamilton. It may be taken at any time that can be arranged to meet the convenience of the staff and of the applicant.

3. Health and Character:

Applicants shall be in good health, and shall be of good moral character and shall possess the personal qualifications necessary to success in teaching.

4. Age Limits:

Men applicants shall be not less than twenty-three, nor more than thirty-eight years of age, and women applicants shall be not less than twenty-one, nor more than thirty-five years of age.

Applications for Admission

Applications for admission shall be made at least two weeks before the opening of the term, on an official form to be obtained from the Deputy Minister, and shall be accompanied by statements on the following official forms:

1. Record of attainments, showing educational attainments, trade training and experience, and other special training.

2. Character certificate from a clergyman or other competent authority that the applicant is of good moral character.

3. Medical certificate from a duly qualified medical practitioner that for the purposes of this certificate he has made a careful examination of the applicant and certifies as follows: (a) that the applicant is free from heart disease or other serious organic affections; (b) that the applicant is free from pulmonary affections, defective hearing, or serious defective eyesight, or abnormal conditions of appearance which would interfere with his work as a teacher; and (c) that in other respects he is physically able for the work of a teacher.

Duties of Teachers-in-Training

1. Teachers-in-training shall attend the classes regularly and punctually and shall submit to such discipline and direction as the Principal may prescribe.

2. Teachers-in-training whose class work shows them to be deficient in English, or in some part of their trade knowledge or skill, or in any related subject in which the deficiency would interfere with their success as teachers, may be required by the Principal to make up the deficiency by attending special classes.

3. Teachers-in-training whose class work shows them to be unduly deficient in the use of English, or in general education, or in their trade knowledge or skill, may be dismissed from attendance at any time by the Principal.

4. Teachers-in-training who do not obtain satisfactory standing in the work of the first term will not be admitted to the second term.

Subjects of Study

1. English.
2. Science of Education.
3. School and Class Management and School Law.
4. Methods of Teaching Industrial Subjects.
5. Practice Teaching.
6. Trade Analysis and Courses of Study.
7. Shop Plans and Equipment.
8. History, Principles and Problems of Vocational Education.
9. Vocational Guidance.
10. Related Work.

Outline of Courses

English

English—both oral and written—a brief review of the main essentials of grammar and composition to enable the shop teacher to avoid the more common errors in the use of words.

Science of Education

- a. Methods of Teaching—Nature and aims of education; educational agencies; nature of experience; principles of learning; acquisition of skills, knowledge and attitudes; teaching and learning; types of lessons; motives and incentives; particular and general ideas; analysis and synthesis; questioning; examination; special methods of teaching shop work, exercise, project, and factory methods, advantages and disadvantages of each; commercial work; work of teacher in preparing tools, machinery, materials and subject matter for lesson.
- b. Psychology—stimulus and response, behaviour; the nervous system, sense organs; instinct, feeling and emotion; sensation, perception, imagination, memory, reasoning; attention, interest; laws of learning; skill training; nature of intelligence.

School Management and School Law

I. Meaning and aims of school management, organization and government; relation to methods of teaching, how to study, types of lessons, assignment of work; individual or class projects, special shop devices; functions of discipline; offences and penalties; methods of shop and classroom discipline; mechanized routine, care of tools, equipment and material; the first day in school; methods of testing progress, examinations; the pupil, as an individual, as a member of a group, his health and safety, formation of good habits, moral training, the teacher's responsibility; the teacher, qualifications and characteristics of successful teachers; relation of teacher to pupil, to Principal, to other members of the staff, to school authorities, to the public; ethics of teaching;

relation of shop layout and equipment to management; shop records, of pupil attainment and progress, inventories of supplies and equipment; school records and reports.

II. The Vocational Education Act, Regulations for Vocational Schools, the Adolescent School Attendance Act; other legislation of direct concern to Vocational Schools.

Observation and Practice Teaching

Each teacher-in-training will be required to submit reports on at least twenty model lessons taught by the critic teacher, to teach at least thirty assigned lessons under the supervision of the critic teacher, and to submit at least thirty reports on lessons taught by student teachers. Each teacher-in-training will be required to take charge of a shop or classroom under the supervision of the critic teacher for two full days, performing all the duties of a full time teacher.

Each teacher-in-training will be required to set an examination paper on a given limit of work, and where possible to assist in evaluating the answer papers of the pupils.

Trade Analysis and Course of Study

Study of the work of the skilled craftsman to determine the teachable content of each trade or calling. Analysis of the trade to determine the skill, and the trade, technical and concomitant knowledges of the skilled worker; selection of instructional materials and arrangement into groups according to learning difficulties; selection of projects to be used to fit the order of the course of study; determination of related mathematics, science, drawing and auxiliary information needed in each project, preparation of course of study; unit courses.

Shop Plans and Equipment

Study of desirable features of shops and classrooms, size, shape, lighting, lay-out; preparation of minimum, and desirable, lists of equipment for the kind of shop in which the teacher-in-training will work; design of benches, tables, furniture; selection of tools and machines; approximate prices; preparation of annual budget.

History, Principles and Problems of Vocational Education

Brief study of guild and mediaeval education—apprenticeship system—evolution of industry, modern production methods, relation of industrial revolution to need for industrial education, development of secondary education, development of vocational education, evening schools, technical schools, manual training, trade schools; part-time, co-operative and apprenticeship classes.

Vocational Guidance

Some principles and assumptions of Vocational Guidance; surveys of students; surveys of fields of employment; occupational information that should be available to students, such as personal qualities demanded, preparation required, wages, promotion opportunities, hazards; counselling and educational guidance; the guidance function of the home room teacher, of the special subject teacher; placement and follow-up; co-operation with outside agencies.

Related Work

- a. Blue-print reading and shop sketching—for teachers of the mechanical trades.
- b. Machine shop or wood shop operations—for teachers of draughting.
- c. Freehand sketching and color work—for teachers of millinery and dress-making.
- d. Suitable types of related work for teachers of other subjects.

Reference Books

- "Elementary Principles of Education." Thorndike and Gates.
"The Educative Process." Bagley.
"A Brief Course in the Teaching Process." Strayer.
"Talks to Teachers." James.
"The Mind and its Education." Betts.
"Foundations of Method." Kilpatrick.
"The Instructor, The Man and The Job." Allen.
"Learning to Earn." Lapp and Mote.
"Principles of Trade and Industrial Teaching." Selvidge and Fryland
"Methods of Teaching Industrial Subjects." Payne.
"Psychology for Students of Education." Gates.
"Classroom Management." Bagley.
"Classroom Organization and Control." Sears.
"School Efficiency." Bennett.
"School Management." White.
"Education and Vocations." Eaton.
"Principles of Guidance." Jones.
"Clothing for Women." Baldt.
"Report of the Royal Commission on Industrial Training and Technical Education."
"Report on Education for Industrial Purposes." Seath.
"Vocational Education Bulletins." Department of Labor, Ottawa.

II.—COURSE FOR INTERIM ORDINARY CERTIFICATES IN SEWING AND DRESSMAKING

Length of Course—One Year

The opening and closing dates are as follows:

1932-1933—September 26 to December 16.

January 9 to June 16.

1933-1934—September 25 to December 21.

January 8 to June 15.

1934-1935—October 1 to December 21.

January 7 to June 14.

Requirements for Admission

One of the following:

- (1) Second Class Public School Certificate.
- (2) First Class Public School Certificate.
- (3) High School Assistant's Certificate.
- (4) Vocational Certificate.

Applications for Admission

Applications for admission shall be made on an official form to be obtained from the Deputy Minister, and shall be accompanied by statements on the following official form: Record of attainments, showing educational attainments and any trade training and experience, or other special training.

Applicants for admission should have some previous training in, and some natural aptitude for, sewing and costume design.

Subjects of Study

Design and Pattern Making.
Sewing and Dressmaking.
History of Costume.
Textiles.
Power Machine Operation.
Special Methods in Household Arts.
Course of Study.
Shop Plans and Equipment.
History, Principles and Problems of Vocational Education.
Regulations for Vocational Schools.

Requirements of Certificate

In order to obtain an Interim Certificate in Dressmaking, a candidate who has completed satisfactorily Course II will be required to obtain one month's trade experience in shops approved by the Minister. Documentary evidence of the time served and of the nature of the work shall be furnished.

III. — SUPPLEMENTARY COURSE IN GENERAL EDUCATION REQUIRED FOR PERMANENT ORDINARY VOCATIONAL CERTIFICATE

Length of Course

The course may be taken in one summer session if the candidate has the necessary groundwork. Candidates who have not had some High School training are advised to do some preliminary work.

English

- (1) Literature—An appreciation course in English Authors. Study of such types of literature as the short poem, the narrative poem, the play, and the short story.

- (2) Composition—Grammatical foundations for use of good English. A study of the sentence, paragraph and longer composition as to construction and use. Oral and written practice in English. Letter writing, to include both personal and business letters.

Mathematics

Fundamental mathematical principles involved in shop problems.

Arithmetic—fractions including decimals, percentage, square root, ratio and proportion.

Mensuration—rectangle, parallelogram, triangle, circle, cylinder, cone, sphere, prism, pyramid.

Algebra—simple equations of one unknown, use of formulae.

Graphs—elementary knowledge of.

Science

Properties of air—weight, pressure, barometer, common pump, siphon.

Hydrostatics—water seeks its own level, buoyancy, hydrometers, specific gravity, pressure in liquids and gases.

Heat—conduction, convection and radiation; expansion in solids, liquids and gases; distillation; units of measurement, B.T.U., calorie.

Mechanics—simple mechanisms, lever, wheel, gear, wedge, screw, chain block.

Chemistry—composition of air, preparation of oxygen, nitrogen, carbon dioxide, and carbon monoxide; combustion, rusting; acids, bases, neutralization.

IV.—COURSE FOR INTERIM SPECIALIST VOCATIONAL CERTIFICATE

Requirements for Certificate

- (1) General Education:

A candidate shall have attainments in English, mathematics and science (physics and chemistry) equivalent to those required for Upper School standing. Documentary evidence of such attainments shall be furnished by the candidate. Summer courses in these subjects will be offered for candidates who have not these attainments.

- (2) Trade experience, skill and knowledge:

In addition to the training and experience required for the Ordinary Certificate a candidate shall have such experience in the trade as will show that the applicant is highly skilled and proficient in all phases of the trade concerned. The candidate shall be required to pass an examination on trade skill and knowledge. The examination will be in three parts (a) oral, (b) written, (c) practical. The practical examination will be a performance test and will be given at the Training College at times to be arranged.

(3) Professional training:

In addition to the course required for the Ordinary Certificate the candidate shall take a course in elementary economics, history of industry, special methods of teaching practical subjects, and related work (i.e., mechanical drawing for shop men, shop work for draftsmen, freehand sketching and color work for dressmakers and milliners, etc.).

Requirements for Admission

A candidate shall have a Permanent Ordinary Certificate.

Applications for Admission

Applications for admission shall be made on official forms to be obtained from the Training College.

Terms

The courses in general education and in professional training may be taken in summer courses.

Outline of Courses

English

(1) Literature:

An appreciation course in English authors, both prose and poetry. Study of such types of literature as the short poem, the narrative poem, the play and the short story. The examinations will test the candidate's familiarity with, and intelligent and appreciative conception of, the selections prescribed for intensive study.

The candidate should make preparation for the course in Literature by reading, during the preceding year

Alexander's Shorter Poems

Alexander's Short Stories and Essays.

(2) Composition:

Grammatical foundations for use of good English. A study of the sentence, paragraph and longer compositions as to construction and use. The study to be based on examples from standard writers. Oral and written practice in English, the subjects to include both industrial and general topics. Letter writing to include both personal and general business letters.

The aim of this course is to give abundant practice in the examination of models and in the oral and written use of English.

The course in English will take two summer terms.

Time: One hour daily.

Candidates who are reading up for this course are recommended to attend evening classes in Middle School English, if such are available.

Shop Mathematics

The course in shop mathematics is designed to meet the needs of shop instructors. It will deal with the fundamental mathematical principles involved in shop problems.

Candidates who are preparing for this course are recommended to attend evening classes in Middle School Mathematics, if such are available.

Part I.

Units of measurement.

Vulgar fractions, decimals, percentage; square root.

Calculation of problems concerned with the building and machine trades—concrete, brickwork, carpentry, plastering, machine shop practice, sheet metal work, etc.

Fundamental operations of algebra—simple equations, fractions, simultaneous equations, formulae; indices; quadratic equations; arithmetical and geometrical progressions.

Mensuration of areas to include rectangle, rhombus, trapezium, triangle, plotting of field notes and finding the area; application of Simpson's rule to irregular figures; circle, sector, segment.

Mensuration of solids to include prism, cylinder, hollow pipes, cone, pyramid, frustum, sphere, solid ring and prismoid. Actual measurement of typical areas and solids.

Text: "Mathematics for Technical Schools." Warren and Rutherford.

Time: The course will take one summer session—one hour a day.

Parts I and II will be given in alternate years. Part I will be given in 1932.

Part II

Geometry—use of instruments in simple geometrical constructions; study of elementary propositions in plane geometry, such as interior and exterior angles, parallel lines, triangles between parallels, square on the hypotenuse of right angled triangle, similar triangles; geometry of the circle.

Trigonometry—simple functions of the angle—sine, cosine, tangent, etc.; study of relations of right angled triangle; use of tables of natural functions; solution of simple triangles, especially of shop problems involving the right angled triangle.

Logarithms—use of tables.

Elementary knowledge of graphs and use of squared paper in plotting.

Manipulation and determination of results from handbook formulae involving trigonometrical and logarithmic factors.

Text: "Ontario High School Geometry."

"Practical Trigonometry." Playne and Faudry.

Time: The course will take one summer session—one hour a day.

Science

A course designed to meet the needs of the shop teacher. Physics and Chemistry will be given in alternate years. Part II will be given in 1932.

Candidates who are preparing for this course are recommended to attend evening classes in Middle School Science, if such are available.

Part I Physics

Mechanics—force, motion, work, energy, acceleration, momentum, power, friction; machines and mechanisms as lever, wheel, gear, wedge, screw, chain block, etc.; practical problems with application to shop calculations.

Hydrostatics—density and specific gravity, hydrometers, buoyancy, pressure in liquids and gases, hydraulic press, siphon, pumps.

Heat—expansion in solids, liquids and gases, anomalous expansion of water; thermometers; effects of pressure and of salts in solution on boiling point; quantity of heat, latent heat of fusion and of vaporization; refrigeration; heat transference by conduction, convection and radiation, practical applications; transformation of heat energy into energy of mechanical motion.

Electricity and Magnetism—an elementary knowledge of magnets, electromagnetic induction, electro magnets; effects of a current, resistance, Ohm's Law.

Textbook: "Ontario High School Physics."

The course will take one summer term—three hours a day.

Part II Chemistry

Chemistry: An experimental study of the more important elements and their compounds found in industry.

Oxygen—Oxidation and combustion, metals and oxygen, heat of combustion, composition of air, hydrogen—water, reduction of oxides by hydrogen; carbon—oxides, carbonates; nitrogen—ammonia, nitric acid; sulphur—oxides, sulphides, sulphuric acid; chlorine—hydrochloric acid, bleaching compounds; iron—steel alloys; copper and its compounds; sodium—sodium hydroxide.

Acids—bases, neutralization; solutions; types of chemical change.

Fundamental laws and principles, symbols, formulae and equations; chemical reactions found in industry.

Textbook: "A First Book in Chemistry."—Bradbury.

"Laboratory Exercises in Chemistry."—Bradbury.

The course will take one summer term—three hours a day.

Economics

The following will be dealt with: The nature of wants, utilities, production, consumption, wealth; the factors of production; distribution; business organization; labour organization; exchange; money; credit and banking; wages; profits; public finance.

Text: "An Introduction to Economics for Canadian Readers."—MacGibbon (MacMillan).

Reference: "Economics for Canadians."—Freeman.

"Economics for the General Reader."—Clay

"Principles of Economics."—Taussig.

Students intending to take the subject should familiarize themselves with the prescribed text or read some other standard elementary text on economics, such as Clay or Freeman.

The course will take one summer term—one hour a day.

The Economics and History of Industry will be offered in alternate years.

The latter will be given in 1933.

History of Industry

A brief survey of world industry and commerce, ancient and mediaeval, up to 16th century; the Industrial Revolution in England and its spread to other countries, contemporary social and political developments; development of industry upon the American continent; industrial organizations and the influence of scientific factory management upon industry and industrial workers; employment methods; wage systems; the Factory Acts with special reference to legislation in Ontario and Canada; the Workmen's Compensation Act of Ontario; the development of labour organization, the trade union movement; social and labour legislation.

Text: "History of Trade and Commerce." Heaton (Thomas Nelson & Sons).

Reference: "The Rise of Modern Industry." Hammond (Harcourt, Brace & Co.).

"Economic and Industrial Progress of the Nineteenth Century." Gibbins (Linscott Pub. Co.).

"History of Commerce." Clive Day (Longmans, Green & Co.).

"The Human Factor in Industry." Frankel and Fleisher (MacMillan).

The course will take one summer term—one hour a day.

Owing to the limitation of time certain topics will be omitted from the work taken in the summer course. A list of these topics with suggested readings may be obtained from the Training College on application. It is expected that the student will make a study of these topics in advance of the summer course.

Special Methods in Vocational Education

An advanced course in special methods of teaching practical subjects, with particular reference to the subject of the candidate concerned. Parts I and II will be given in alternate years. Part II will be given in 1932.

Part I

Pedagogical principles of Industrial Education; laws and conditions of learning; skill habits; lesson forms, plans and helps; characteristics of adolescence; seminar discussions.

Time—one summer course; one hour a day.

Part II

Grades and grading systems; rating schemes; new type tests; job analysis and job sheets; instruction sheets; general methods of organizing shop work; teacher-rating schemes; apprenticeship schemes and relation of vocational schools to industry.

Text—"Methods of Teaching Shop Subjects." Payne (McGraw-Hill Co.)

Reference—"Vocational Education." Snedden.

Time—One summer course, one hour a day.

V.—COURSE FOR VOCATIONAL SCHOOL PRINCIPAL'S CERTIFICATE

This course is intended to provide such knowledge and appreciation of wage-earning occupations, and the problems and organization of vocational schools, as may be required for a Vocational School Principal's Certificate under Reg. 49 (3) (a) of the Regulations for Vocational Schools.

Part I will be taken in two summer sessions.

Part II will be done extra-murally.

Part I

Principles and Problems of Vocational Education.

Vocational and Educational Guidance.

Surveys, Job Analysis, Plant Studies, etc.

History of Industry.

School Organization and Administration.

Educational Measurements.

Educational and Labor Legislation.

Part II

- (a) Critical study of prescribed published matter concerning vocational education.
- (b) Survey of the local industries of the candidate's community.
- (c) Study of special type schools.

Requirements for Admission

A High School Principal's Certificate.

VI.—SPECIAL SUMMER COURSES

1.—Special Course B for Domestic Arts Certificate (Dressmaking)

A special course in practical work in sewing and dressmaking and in the special methods of teaching these subjects for teachers of Household Science or other certificated teachers who have already had some training in sewing and dressmaking.

Length of Course

The course consists of two parts which may be taken in two summer terms of five weeks each. Most of the time is given to practical work. Part of the time is given to lecture work in design and to instruction in special methods of teaching domestic arts.

Requirements for Admission

The following may be admitted to this course:

- (1) Teachers holding a Household Science Specialist's Certificate.
- (2) Teachers holding an Ordinary Household Science Certificate.
- (3) Certificated teachers who have had previous training or experience in sewing and dressmaking, approved by the Minister.

Applications for Admission

Applications for admission shall be made on an official form to be obtained from the Deputy Minister and shall be accompanied by statements on the following official form: Record of Attainments showing educational attainments, trade training and experience, and other special training.

Requirements for Certificates

Interim Ordinary Certificates are granted to candidates who

- (a) have completed this special course; and
- (b) have obtained experience in the trade approved by the Minister.

At least six months' experience in approved shops in work of sufficient variety to gain experience in the principal parts of the trade is required. Documentary evidence of the time served and of the nature of the work shall be furnished.

2.—Special Course C for Domestic Arts Teachers—Advanced Dressmaking

A special practical course in advanced dressmaking. This course will include work in garment construction, draping and design. It is intended as an improvement course for teachers already in service. The length of the course will be one summer session.

Requirements for Admission

The following may be admitted to the course:

- (1) Teachers holding Interim or Permanent Vocational Certificates in sewing and dressmaking.
- (2) Teachers holding Household Science Certificates who have completed the Special Course B in sewing and dressmaking.

3.—Mechanical Drawing

The course in mechanical drawing is specially designed to meet the needs of shop instructors. It will include freehand dimensioned sketching, instrumental drawing, and blue-print reading. Some practice will be given in sketching on the blackboard.

Time—Three hours a day.

4.—Machine Shop Practice

A special course in machine shop practice in which teachers of mechanical drawing, motor mechanics, and other similar subjects may become acquainted with the more common operations and processes of machine shop work.

Instruction in elementary processes used in the machine shop—bench work, simple layouts, chipping, filing and scraping; drill press, drilling and countersinking; lathe, parallel and taper turning, parting, knurling and thread cutting; shaper, flat and side planing; milling machine, plain milling, keyway cutting, gear cutting including plain and differential indexing.

The course is not intended for machinists or tool-makers.

Time—Three to five hours a day.

Requirements for Admission

The following may be admitted to courses 3 or 4:

- (1) Teachers holding Interim or Permanent Vocational Certificates.
- (2) Teachers holding Manual Training Certificates.

Applications for Admission

Applications for admission shall be made on official forms to be obtained from the Deputy Minister.

VII.—COURSE FOR INTERIM ORDINARY MANUAL TRAINING CERTIFICATE

The Department of Education grants Elementary, Ordinary, and Specialists' Certificates in Manual Training.

The Elementary Certificate is valid only in rural schools.

The Ordinary Certificate is valid in all urban schools except a Collegiate Institute.

The Specialist's Certificate is valid in all schools.

Courses for the Elementary and Specialists' Certificates are given in summer sessions. For information regarding these courses see the General Announcement of Summer Courses.

Length of Course—One year.

The opening and closing dates are as follows:

- 1932-1933—September 26 to December 16.
January 9 to June 16.
- 1933-1934—September 25 to December 21.
January 8 to June 15.
- 1934-1935—October 1 to December 21.
January 7 to June 14.

Requirements for admission—The students admitted are of two classes:
(a) Normal School graduates—holders of an Interim Second-Class Professional Certificate, (b) skilled mechanics.

Students in class (a) shall be required to present some evidence of skill in the use of the common woodworking tools and a knowledge of mechanical drawing. Failing the presentation of satisfactory evidence such skill and knowledge may be tested by examination.

Students in class (b) shall be required to pass an examination in general education. The examination will consist of papers in arithmetic, composition, spelling, penmanship, mechanical drawing and woodwork and woodworking tools. The work in arithmetic will include the four fundamental operations, simple, vulgar and decimal fractions, percentages, weights and measures. If the applicant submits satisfactory evidence of having taken two years' high school work or its equivalent, he may be exempted from the examinations in arithmetic, composition, spelling and penmanship. Documentary evidence of trade training and experience shall be presented.

The holders of Elementary Certificates in Manual Training will be allowed to enter the one year course qualifying for the Ordinary Certificate in January instead of the previous October.

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Announcement of the

ONTARIO
TRAINING COLLEGE FOR
TECHNICAL TEACHERS



ONTARIO

DEPARTMENT OF EDUCATION

1939 - 1940

1940 - 1941

1941 - 1942

HAMILTON • ONTARIO

The Ontario Training College for Technical Teachers provides courses of study in methods of teaching and class management for preparation of teachers of practical or shop subjects in vocational schools. These courses are professional or academic in nature and do not include instruction in the practical or trade side of the subject which the student is preparing to teach.

The Training College also provides courses of studies for prospective teachers of manual training or general shop work. These courses are mainly practical in nature and cover the manipulative experiences found in a general shop.

Courses of Study

- I. Course for Interim Ordinary Certificate in a Vocational Subject.
- II. Course for Interim Specialist Certificate in a Vocational Subject.
- III. Course for Vocational School Principal's Certificate.
- IV. Course for Vocational Guidance Certificate.
- V. Course in Sewing and Dressmaking.
- VI. Courses for Interim Manual Training Certificates.
 1. Elementary Certificate, Type B.
 2. Elementary Certificate, Type A.
 3. Intermediate Certificate.
 4. Specialist Certificate.
- VII. Special Summer Extension Courses.
 1. Mechanical Drawing.
 2. Machine Shop Practice.

I.—COURSE FOR INTERIM ORDINARY VOCATIONAL CERTIFICATE

Requirements for Certificates

Interim Certificates are granted to candidates who,

- (a) have a fair general education, approved by the Minister,
- (b) have had training and experience, approved by the Minister, in the subject for which the certificate is to be issued, and
- (c) have taken a course of training in teaching and school management, approved by the Minister.

Interim Certificates are valid for two years.

Permanent Certificates are granted to candidates who hold Interim Certificates and who have had two years' successful experience as teachers in a day vocational school in Ontario, approved by an inspector, and who have Middle School Standing in English (Literature and Composition), Mathematics (Algebra and Geometry), Science (Physics and Chemistry).

Length of Course

The course will take twenty-five weeks, divided into an autumn term and a winter term. The opening and closing dates are as follows:

1939-40 — September 25th — December 22nd.
January 3rd — March 21st.

1940-41 — September 30th — December 20th.
January 6th — April 4th.

1941-42 — September 29th — December 19th.
January 5th — April 2nd.

Requirements for Admission

1. General Education:

(a) An applicant for admission shall be required to pass an examination in general education. In case of candidates for shop or practical subjects, the examination will consist of a paper in mathematics and a paper in composition, spelling and penmanship. The work in mathematics will include the four fundamental operations in arithmetic, simple, vulgar and decimal fractions and percentage. In the case of candidates for drafting certificates the paper in mathematics will include arithmetic, algebra, geometry and elementary trigonometry. The examination will be given at the Training College on the first day of the term.

(b) If the applicant submits satisfactory evidence of having taken at least two years' secondary school work or its equivalent, he may be exempted from the examination in general education. In the case of candidates for drafting certificates Middle School standing in mathematics is required.

2. Trade training and experience:

(a) The training or apprenticeship required shall be that usually demanded for journeyman's qualifications in the trade concerned. Special train-

ing obtained in an approved day vocational school will be taken into account in considering the period of training. Applicants should submit statements from the persons or firms under whom they were trained, showing the length of the training period and the nature of the work.

(b) The experience required shall be some years' wage-earning journeyman experience with approved high-grade firms, and shall be such as to show that the applicant is a skilled craftsman, competent in all the main branches of the trade, and familiar with its recent developments. The length of the journeyman experience depends upon the nature of the trade. Documentary evidence of experience in the trade in approved shops shall be furnished by the applicant.

(c) The applicant shall be required to pass an examination designed to test his attainments as a skilled worker in the trade concerned. The examination shall be on the fundamental principles, operations, processes and skills of the trade, and shall be in two parts: (a) written, (b) practical. In the practical examination he shall be required to show his skill in a performance test. This examination will be given at the Training College, at times to be arranged. A candidate whose documentary evidence of proficiency is conclusive may be exempted from this examination.

3. Health and Character:

Applicants shall be in good health, and shall be of good moral character and shall possess the personal qualifications necessary to success in teaching.

4. Age Limits:

Men applicants shall be not less than twenty-three, nor more than thirty-eight years of age, and women applicants shall be not less than twenty-one, nor more than thirty-five years of age.

Applications for Admission

Applications for admission shall be made at least two weeks before the opening of the term, on an official form to be obtained from the Training College, and shall be accompanied by statements on the following official forms:

1. Record of attainments, showing educational attainments, trade training and experience, and other special training.

2. Character certificate from a clergyman or other competent authority that the applicant is of good moral character.

3. Before the final admission, an applicant must submit a certificate of physical fitness signed by a medical examiner appointed by the Minister of Education. The medical examination, for which a fee of \$2.00 will be paid by applicants, will be conducted at the Ontario Training College for Technical Teachers during the first two weeks after the opening of the term.

In the event of the rejection of an applicant in consequence of the medical examination, and providing that the place of residence is in Ontario, the fee will be refunded and the actual cost of transportation from the Ontario Training College for Technical Teachers to the applicant's home will be paid by the College.

Provisions for Applicants with High School Assistant's Certificates

Candidates who have fulfilled the requirements for admission to the Ontario Training College for Technical Teachers, who hold Interim High School Assistants' certificates and who have had at least two years of successful teaching experience in the Continuation Schools, High Schools or Collegiate Institutes of Ontario, may be admitted to a Special Summer Course at the Ontario Training College for Technical Teachers, and if successful at the examination held at the conclusion of the Summer Course, may, on the recommendation of the examiners, be granted by the Minister of Education, provisional vocational certificates valid for one year.

Such candidates, in order to obtain Interim Vocational Certificates will pass the examinations prescribed for a Vocational certificate and will also satisfy the examiners, by practical tests, that they are competent to teach efficiently the vocational subjects concerned.

Candidates who have obtained High School Assistants' certificates by attendance at the Ontario College of Education, and who, in addition to the practice teaching lessons prescribed for candidates for High School Assistants' certificates, have taught to the satisfaction of the staffs of the Ontario College of Education and the Ontario Training College for Technical Teachers, at least ten lessons in the vocational subjects concerned, will be exempted from the practical test in teaching.

Duties of Teachers-in-Training

1. Teachers-in-training shall attend the classes regularly and punctually and shall submit to such discipline and direction as the Principal may prescribe.

2. Teachers-in-training whose class work shows them to be deficient in English, or in some part of their trade knowledge or skill, or in any related subject in which the deficiency would interfere with their success as teachers, may be required by the Principal to make up the deficiency by attending special classes.

3. Teachers-in-training whose class work shows them to be unduly deficient in the use of English, or in general education, or in their trade knowledge or skill, may be dismissed from attendance at any time by the Principal.

4. Teachers-in-training who do not obtain satisfactory standing in the work of the first term will not be admitted to the second term.

Subjects of Study

1. English.
2. Science of Education.
3. School and Class Management and School Law.
4. Methods of Teaching Industrial Subjects.
5. Practice Teaching.
6. Trade Analysis and Courses of Study.
7. Shop Plans and Equipment.
8. History, Principles and Problems of Vocational Education.
9. Vocational Guidance.
10. Related Work.
11. Essay or Report on Assigned Topic.

Outline of Courses

English

English—both oral and written—a brief review of the main essentials of grammar and composition to enable the shop teacher to avoid the more common errors in the use of words.

Science of Education

- a. Methods of Teaching—Nature and aims of education; educational agencies; nature of experience; principles of learning; acquisition of skills, knowledge and attitudes; teaching and learning; types of lessons; motives and incentives; particular and general ideas; analysis and synthesis; questioning; examination; special methods of teaching shop work, exercise, project, and factory methods, advantages and disadvantages of each; commercial work; work of teacher in preparing tools, machinery, materials and subject matter for lesson.
- b. Psychology—stimulus and response, behaviour; the nervous system, sense organs; instinct, feeling and emotion; sensation, perception, imagination, memory, reasoning; attention, interest; laws of learning; skill training; nature of intelligence.

School Management

1. Meaning and aims of school management, organization and government; relation to methods of teaching, how to study, types of lessons, assignment of work; functions of discipline, methods of shop and class-room discipline, mechanized routine, care of tools, equipment and materials; the first day in school; the pupil, as an individual, as a member of a group, his health and safety, formation of good habits, moral training, the teacher's responsibility; the teacher, qualifications and characteristics of successful teachers; relation of teacher to pupil, to Principal, to other members of the staff, to school authorities, to the public; ethics of teaching.

2. Special shop devices, individual and class projects; methods of testing progress, examinations; shop records of pupil attainment and progress, inventories of supplies and equipment; school records and reports; relation of shop layout and equipment to management; offences and penalties.

School Law

The Vocational Education Act, Regulations for Vocational Schools, the Apprenticeship Act, the Trade Schools Regulation Act; other legislation and regulations of direct concern to Vocational Schools.

Observation and Practice Teaching

Each teacher-in-training will be required to submit reports on at least twenty model lessons taught by the critic teacher, to teach at least thirty assigned lessons under the supervision of the critic teacher, and to submit at least thirty reports on lessons taught by student teachers. Each teacher-in-training will be required to take charge of a shop or classroom under the supervision of the critic teacher for at least one week, performing all the duties of a full time teacher.

Each teacher-in-training will be required to set an examination paper on a given limit of work, and where possible to assist in evaluating the answer papers of the pupils.

Trade Analysis and Course of Study

Study of the work of the skilled craftsman to determine the teachable content of each trade or calling. Analysis of the trade to determine the skill, and the trade, technical and concomitant knowledges of the skilled worker; selection of instructional materials and arrangement into groups according to learning difficulties; selection of projects to be used to fit the order of the course of study; determination of related mathematics, science, drawing and auxiliary information needed in each project, preparation of course of study; unit courses.

Shop Plans and Equipment

Study of desirable features of shops and classrooms, size, shape, lighting, lay-out; preparation of minimum, and desirable, lists of equipment for the kind of shop in which the teacher-in-training will work; design of benches, tables, furniture; selection of tools and machines; approximate prices; preparation of annual budget.

History, Principles and Problems of Vocational Education

Brief historical sketch to show vocational aspects of educational developments; contributions of the educational reformers, Comenius, Locke, Rousseau, Pestalozzi, Fellenberg, Herbart, Froebel, Spencer; relation of industrial developments to the need for industrial education; development of secondary education, of vocational education; the manual training movement, the mechanics' institute, the farm and trade school, industrial and technical schools, trade schools; part-time, co-operative and apprenticeship classes; the Ontario educational system.

Vocational Guidance

Some principles and assumptions of Vocational Guidance, surveys, analyses, counselling, training, placement, and follow-up; guidance an essential prerequisite to selection of specialized courses; opportunities and limitations for effective guidance by persons other than the trained counsellors; the relation of the special subject teacher and the home room teacher to the counsellor; the qualifications of a good counsellor.

Related Work

- a. Blue-print reading and shop sketching—for teachers of the mechanical trades.
- b. Machine shop or wood shop operations—for teachers of drafting.
- c. Freehand sketching and color work—for teachers of millinery and dress-making.
- d. Suitable types of related work for teachers of other subjects.

Text Books

Principles of Methods. Normal School Manual.
"Psychology for Students of Education." Gates.
Teaching Shop Work. Haynes.
School Management. Normal School Manual.
History of Education. Normal School Manual.
English—to be selected.

Reference Books

"Educational Psychology." Sandiford.
"Teaching Procedures." Ruediger.
"Elementary Principles of Education." Thorndyke and Gates.
"The Educative Process." Bagley.
"A Brief Course in the Teaching Process." Strayer.
"Talks to Teachers." James.
"Foundations of Method." Kilpatrick.
"The Instructor, The Man and The Job." Allen.
"Learning to Earn." Lapp and Mote.
"Principles of Trade and Industrial Teaching." Selvidge and Fryland.
"Classroom Management." Bagley.
"Classroom Organization and Control." Sears.
"School Efficiency." Bennett.
"History of Manual and Industrial Education." Bennett.
"History of Education." Cubberley.
"Doctrines of the Great Educators." Rusk.
"A Brief Course on the History of Education." Munroe.
"Educational Reformers." Quick.
"Education as Guidance." Brewer.
"Education and Vocations." Eaton.
"Principles of Guidance." Jones.
"Clothing for Women." Baldt.
"Report of the Royal Commission on Industrial Training and Technical Education."
"Report on Education for Industrial Purposes." Seath.

II—COURSE FOR INTERIM SPECIALIST VOCATIONAL CERTIFICATE

Requirements for Certificate

(1) General Education:

Upper School standing in English (Literature and Composition), Mathematics (Algebra and Geometry), Science (Physics and Chemistry).

(2) Trade experience, skill and knowledge:

In addition to the training and experience required for the Ordinary Certificate, a candidate shall have such experience in the trade as will show that the applicant is highly skilled and proficient in all phases of the trade concerned. The candidate shall be required to pass an examination on trade skill and knowledge. The examination will be in two parts, (a) written, (b) practical, and will be given at the Training College at times to be arranged.

(3) Professional training:

In addition to the course required for the Ordinary Certificate, the candidate shall take a course in elementary economics, history of industry, special methods of teaching practical subjects, and related work.

Length of Course

Two Summer sessions.

Requirements for Admission

A candidate shall have a Permanent Ordinary Certificate, and Upper School standing in English, Mathematics and Science.

Applications for Admission

Applications for admission shall be made on official forms to be obtained from the Training College.

Outline of Courses

Economics

The nature of wants, utilities, wealth, production, consumption, distribution; business organization; labour organization; exchange; money; credit and banking; wages; profits; public finance.

Text: "The Substance of Economics." Silverman.

References:

"Economics for the General Reader." Clay.

"Outline of Economics." Ely.

"Principles of Economics." Taussig.

The course will take one summer term—one hour a day.

Students intending to take the subject should read some standard elementary texts on economics, such as

"Economics for Canadians." Freeman.

"An Introduction to Economics for Canadian Readers." MacGibbon.

"Elementary Economics." Michell.

"First Principles of Political Economy." Gide.

The Economics and History of Industry will be offered in alternate years. The latter will be given in 1939.

History of Industry

A brief survey of world industry and commerce, ancient and mediaeval, up to 16th century; the Industrial Revolution in England and its spread to other countries, contemporary social and political developments; development of industry upon the American continent; industrial organizations and the influence of scientific factory management upon industry and industrial workers; employment methods; wage systems; the Factory Acts with special reference to legislation in Ontario and Canada; the Workmen's Compensation Act of Ontario; the development of labour organization, the trade union movement; social and labour legislation.

Text: "History of Trade and Commerce." Heaton (Thomas Nelson & Sons).

References:

"The Rise of Modern Industry." J. L. and B. Hammond.

"History of Commerce." Clive Day.

"Recent Social Trends."

"The Labour Gazette." Department of Labour, Ottawa.

"Industry's Coming of Age." R. G. Tugwell.

"Men and Machines." Stuart Chase.

The course will take one summer term—one hour a day.

Owing to the limitation of time certain topics will be omitted from the work taken in the summer course. A list of these topics with suggested readings may be obtained from the Training College on application. It is expected that the student will make a study of these topics in advance of the summer course.

Special Methods in Vocational Education

An advanced course in special methods of teaching practical subjects, with particular reference to the subject of the candidate concerned. Parts I and II will be given in alternate years. Part I will be given in 1939.

Part I.

Principles of industrial education; laws and conditions of learning; psychology of learning skills.

Following the course an extra-mural assignment dealing with some learning situation will be given each candidate.

Time: One summer course, one hour a day.

Part II

Grading systems; distribution of marks; examinations; new-type tests; job analysis; instruction sheets; organization and administration of shop work; records.

Following the course an extra-mural assignment regarding some shop problems will be given each candidate.

Time: One summer course, one hour a day.

Related Work

The related work to be taken by each applicant will be specially planned to meet the needs of each particular candidate.

- (a) For teachers of drafting—a study of machine tools and machine shop operations and the influence on designs in the draughting room.
- (b) For other teachers—drawing, freehand and instrumental; sketching on the black board; methods of reproduction, making tracings, blueprints, vandykes, stencils, etc.; construction of unit instruction sheets.

Time: Three hours a day for one summer term.

III.—COURSE FOR VOCATIONAL SCHOOL PRINCIPAL'S CERTIFICATE

This course is intended to provide such knowledge and appreciation of wage-earning occupations, and the problems and organization of vocational schools, as may be required for a Vocational School Principal's Certificate under Reg. 49 (3) (a) of the Regulations for Vocational Schools.

Part I and II will be offered in alternate summer sessions. Part I shall be taken before Part II.

Part I will be offered in 1940.

Part III will be done extra-murally. Details will be supplied to each candidate as required.

Part I.

School Organization and Administration.

Vocational and Educational Guidance.

Educational and Labour Legislation.

Part II.

Regulations for Vocational Schools.

Principles and Problems of Vocational Education.

Tests and Measurements.

Occupational Information, Surveys, Job Analysis, Plant Studies.

History of Industry.

Part III.

- (a) A critical study of prescribed published matter concerning vocational education.
- (b) A survey of local industries of the candidate's community.
- (c) A study of special type schools.

Requirements for Admission

A High School Principal's Certificate.

Applications for Admission

Application for admission shall be made on a form to be obtained from the Ontario Training College for Technical Teachers.

IV.—COURSE FOR VOCATIONAL GUIDANCE CERTIFICATE

The course shall consist of three parts: Part I and II may be completed in one summer session each; Part III is extra-mural. Part I shall be taken before Part II. Part I will be offered in 1940.

Part I.

School Organization and Administration.

Economics.

Vocational and Educational Guidance.

Educational and Labour Legislation.

Sociology.

Part II.

Principles and Problems of Vocational Education.

Tests and Measurements.

Occupational Information, Surveys, Job Analysis, Plant Studies.

History of Industry.

Part III.

Prescribed Reading.

Administration of Tests.

Field Work—Surveys, Job Analysis, Plant Studies.

Certificate—Successful candidates will be awarded an Interim certificate in Vocational Guidance, valid in any Public or Secondary School in Ontario.

Requirements for Admission

A candidate shall have a First Class Professional certificate, or a High School Assistant's certificate, or a Vocational Teacher's certificate, or Manual Training Specialist's certificate, and five years' successful teaching experience approved by the Inspectors of the Department of Education.

Applications for Admission

Applications for admission shall be made on official forms to be obtained from the Deputy Minister.

V.—COURSE IN SEWING AND DRESSMAKING

A special course in practical work in sewing and dressmaking and in the special methods of teaching these subjects for:

1. Teachers wishing to qualify for a Permanent Intermediate or Permanent Specialist's Certificate in Home Economics.

(a) To obtain a Permanent Certificate, in each case, the candidate must hold an Interim Certificate and have had two years' successful teaching experience in Home Economics, approved by the Provincial Inspector of Home Economics.

(b) Candidates also shall complete successfully the Course in Sewing and Dressmaking, at the Training College for Technical Teachers, within five years after obtaining Interim Intermediate or Specialist's Certificates in Home Economics.

2. Home Economics teachers wishing to qualify for an Interim Ordinary Vocational Certificate in Sewing and Dressmaking.

Interim Vocational Certificates are granted to candidates who

(a) have completed their special course; and

(b) have obtained experience in the trade approved by the Minister.

At least six months' experience in approved shops in work of sufficient variety to gain experience in the principal parts of the trade is required. Documentary evidence of the time served and of the nature of the work shall be furnished.

Length of Course

The course consists of two parts which may be taken in two summer terms of five weeks each. Most of the time is given to practical work. Part of the time is given to lecture work in design and to instruction in special methods of teaching clothing and textiles.

Requirements for Admission

The following may be admitted to this course:

Teachers holding (1) a Specialist's Certificate in Home Economics.

(2) an Intermediate Certificate in Home Economics.

(3) an Elementary Home Economics Certificate, Type A.

(4) an Elementary Home Economics Certificate, Type B.

(5) an Elementary Home Economics Certificate, Type C.

Applications for Admission

Applications for admission shall be made on an official form to be obtained from the Ontario Training College for Technical Teachers, and shall be accompanied by statements on the following official form—Record of Attainments, showing educational attainments, trade training and experience, and other special training.

VI.—COURSES FOR INTERIM MANUAL TRAINING CERTIFICATES

1.—Elementary Manual Training Certificate, Type B.

Length of Course

The course shall consist of two summer courses of 125 clock hours each. Part I shall be taken before Part II.

Objects of the Course

(a) To provide training for the teacher conducting Manual Training in a rural school.

(b) To assist the Auxiliary class teacher to develop and perfect the hand-work which forms a large part of his curriculum.

(c) To provide the regular grade teacher with a background of handwork experiences for the enrichment of the regular curriculum.

Note

1. The Elementary Certificate, either Type A or Type B, is required for admission to the one year course leading to the Intermediate Certificate.

Requirements for Admission

Teachers who hold at least a Second Class Certificate may be admitted to the course.

Applications for Admission

Application for admission shall be made on an official form to be obtained from the Deputy Minister.

Subjects of Study

Part I.

1. Constructive Work.
 - a. Paper Work.
 - b. Cardboard Work.
 - c. Bookbinding.
 - d. Modelling and Design.
 - e. Linoleum Block Work.
 - f. Weaving.
 - g. Rope Work.
2. Shop Work.
 - a. Coping Saw Work, Thin and Strip Woodwork.
 - b. Simple Bench Tool Operations.
 - c. Wood Finishing.
 - d. Materials and Tools.
 - e. Shop Practice.
3. Mechanical Drawing.
4. Organization and Methods.

Part II.

1. Shop Work.
 - a. Bench Woodwork.
 - b. Wood Finishing.
 - c. Metal Work.
 - d. Material and Tools.
 - e. Household Mechanics.
 - f. Shop Practice.
2. Mechanical Drawing.
3. Courses of Study, Equipment Lists, Budget.
4. Theory and Methods.
 - a. General.
 - b. Special Problems in Rural Schools.

A syllabus showing the details of the courses may be obtained from the Department of Education.

2.—Elementary Manual Training Certificate, Type A.

Length of Course

The course to consist of two summer courses, of 200 clock hours each. Part I to be taken before Part II.

Objects of the Course

To provide preliminary training for the teaching of Shop Work in Grades IX and X in High Schools, Continuation Schools, Public and Separate Schools.

Note—The Elementary Certificate, Type A, is accepted as meeting the requirements for admission to the one year course at the Ontario Training College for Technical Teachers leading to the Intermediate Certificate.

Requirements for Admission

- (a) An Interim High School Assistant's Certificate, or
- (b) An Interim First Class Certificate.

Notes—(a) Applicants who satisfactorily complete the prescribed manual training courses in Grades IX and X, and the shop work option at the College of Education to be admitted to Part II.

(b) Applicants who hold the Elementary Manual Training Certificate, Type B, to be admitted to Part II.

Applications for Admission

To be made on an official form to be obtained from the Deputy Minister.

Subjects of Study

In both Parts of the course, tools, machines and materials to be studied at the time of use to the extent necessary for the performance of the work.

Part I.

1. Drafting.
2. Woodwork.
 - a. Bench Tool Operation.
 - b. Machine Tool Operation.
 - c. Wood Finishing.
 - d. Lumber.
3. Metal Work.
 - a. Forge and Vise Work.
 - b. Machine Shop Practice.
 - (i.) Bench Operations.
 - (ii.) Machine Tool Operations.
 - c. Ornamental Metal Work.
 - d. Sheet Metal Work.
4. Motor Mechanics.
5. Applied Electricity.
6. Farm Mechanics.
7. Organization and Methods.
8. Shop Practice.

Part II.

1. Drafting.
2. Woodwork.
 - a. Bench Tool Operations.
 - b. Machine Tool Operations.
 - c. Wood Finishing.
3. Metalwork.
 - a. Forge and Vise Work.
 - b. Machine Shop Practice.
 - (i.) Bench Operations.
 - (ii.) Machine Tool Operation.
 - c. Ornamental Metal Work.
 - d. Sheet Metal Work.
4. Motor Mechanics.
5. Applied Electricity.
6. Farm Mechanics.
 - a. Belt Lacing and Leatherwork.
 - b. Concrete Work.
 - c. Pipe Fitting.
 - d. Rope Work.
7. Organization and Methods.
8. Shop Practice.

A syllabus showing the details of the courses may be obtained from the Department of Education.

3.—Intermediate Manual Training Certificate.

Length of Course

For applicants admitted under 3 (a) below—one year.

For applicants admitted under 3 (b) below—two years.

The opening and closing dates are as follows:

1939-40 — September 25th — —December 22nd.

January 3rd — June 21st.

1940-41 — September 30th — December 20th.

January 6th — June 20th.

1941-42 — September 29th — December 19th.

January 5th — June 19th.

Objects of the Course

To provide training for the teaching of shop work in full-time positions in Public and Separate Schools, Continuation Schools, High Schools, and in Grades IX and X in Collegiate Institutes.

Requirements for Admission

- (a) Applicants who hold an Elementary Manual Training Certificate, either Type A or Type B, may be admitted to the one year course.
- (b) Applicants who meet the following requirements may be admitted to the two-year course:
 - (i.) have graduated from an approved four-year industrial course in a vocation school, which includes machine shop practice, wood-working, drafting, electricity, motor mechanics and sheet metal work.
 - (ii.) are at least twenty years of age.
 - (iii.) have had at least one year of industrial wage earning experience.
 - (iv.) are approved by the Minister.

Applications for Admission

To be made on official forms to be obtained from the Training College.

Subjects of Study

For the one-year course:

- (1) Special Methods of teaching shop work.
- (2) Practice Teaching.
- (3) Equipment, shop plans.
- (4) Vocational Guidance.

- (5) Shop Work.
- (i.) Drafting.
 - (ii.) Applied Electricity.
 - (iii.) Farm Mechanics.
 - (iv.) Forge and Vise Work.
 - (v.) Machine Shop Practice.
 - (vi.) Ornamental Iron Work.
 - (vii.) Motor Mechanics.
 - (viii.) Sheet Metal Work.
 - (ix.) Woodwork.
 - (x.) Welding.

For the two-year course :

- (1) The subjects of the one-year course.
- (2) Methods of Teaching, School Management, School Law.
- (3) English, Science, Mathematics.

4.—Specialist Manual Training Certificate.

Length of Course

Three summer courses of 200 hours each. The course is divided into Parts I, II and III, and must be taken in order.

Objects of the Course

To provide training for the teaching of shop work in Collegiate Institutes.

Requirements for Admission

An Intermediate Manual Training Certificate (either Interim or Permanent).

Applications for Admission

To be made on an official form to be obtained from the Deputy Minister.

Subjects of Study

Part I.

- 1. Principles of Design.
- 2. Cabinet Making and Wood Finishing.

Part II.

- 1. Machine Shop Practice.
- 2. Art Metal Work.

Part III.

- 1. Applied Electricity.
- 2. Motor Mechanics.

VII.—SPECIAL SUMMER EXTENSION COURSES

1.—Mechanical Drawing

The course in mechanical drawing is specially designed to meet the needs of shop instructors. It will include freehand dimensional sketching, instrumental drawing and blueprint reading. Some practice will be given in sketching on the blackboard.

Time—Three to five hours a day.

2.—Machine Shop Practice

A special course in machine shop practice in which teachers of mechanical drawing, motor mechanics, and other similar subjects may become acquainted with the more common operations and process of machine shop work.

Instruction in elementary processes used in the machine shop—bench work, simple layouts, chipping, filing and scraping; drill press, drilling and countersinking; lathe, parallel and taper turning, parting, knurling and thread cutting; shaper, flat and side planing; milling machine, plain milling, keyway cutting, gear cutting including plain and differential indexing.

The course is not intended for machinists or tool-makers .

Time—Three to five hours a day.

Requirements for Admission

The following may be admitted to courses 1 or 2:

- (1) Teachers holding Interim or Permanent Vocational Certificates.
- (2) Teachers holding Intermediate Manual Training Certificates.

Applications for Admission

Applications for admission shall be made on official forms to be obtained from the Training College.